

IN THE CLAIMS

Please amend the claims as follows:

1-12. (Canceled)

13. (New) A hot plate unit comprising:

a supporting case having a thickness of 50 mm or less and including a bottom;

a ceramic substrate fitted to said supporting case and having a surface;

a resistance heating element provided on the surface of said ceramic substrate or inside said ceramic substrate; and

a coolant introducing pipe disposed at the bottom of said supporting case.

14. (New) The hot plate unit according to claim 13,

wherein plural openings are formed at the bottom of said supporting case.

15. (New) The hot plate unit according to claim 13,

wherein a ratio of a thickness l of said ceramic substrate to the thickness L of said supporting case satisfies  $0.02 \leq l/L$ .

16. (New) The hot plate unit according to claim 13,

wherein a ratio of a thickness l of said ceramic substrate to the thickness L of said supporting case satisfies  $l/L \leq 10$ .

17. (New) The hot plate unit according to claim 13,

wherein said ceramic substrate comprises a nitride ceramic or a carbide ceramic.

18. (New) The hot plate unit according to claim 13,

wherein a thermocouple is provided in said ceramic substrate.

19. (New) The hot plate unit according to claim 13,

wherein said ceramic substrate has a diameter of 300 mm or more.

20. (New) The hot plate unit according to Claim 13,

wherein said supporting case has a thickness of 25 mm or less.

21. (New) The hot plate unit according to claim 13, wherein said supporting case is made of metal.

22. (New) The hot plate unit according to claim 13, which is used at a temperature of 150°C or higher.